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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,572	07/01/2004	Akihiro Shimada	Q81988	5252
23373	7590	11/08/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,572	<b>Applicant(s)</b> SHIMADA, AKIHIRO	
	<b>Examiner</b> Nguyen N. Hanh	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 7/31/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 3-5 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 1-5 in the reply filed on 7/31/2006 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Traxler et al. in view of Muszynski.

Regarding claim 1, Traxler et al. disclose show all limitations of the claimed invention except showing a magnetic bearing apparatus comprising: a rotatable rotary member (2.5 in Fig. 2) in which a radial magnetic bearing rotor (of radial magnetic bearing 2.2.1 and 2.2.2) and an axial magnetic bearing disc (of axial magnetic bearing 2.2.3) are secured to a rotary shaft; electromagnets that are arranged around said rotary member via a small gap; and a case housing them (Fig. 2), wherein said apparatus further comprises: cooling wind producing means for producing cooling wind of a low temperature and a cooling wind flow path through which the low-temperature cooling wind produced by said cooling wind producing means is to flow into said magnetic bearing apparatus (Col. 1, lines 44-55 and Col. 5, lines 43-48). Traxler et al.

fail to show the cooling wind producing means for producing cooling wind of a low temperature with using a driving force of the rotary member.

However, Muszynski discloses an electric machine wherein the cooling wind producing means (100) for producing cooling wind of a low temperature with using a driving force of the rotary member (110) for the purpose of reducing noise cause by flow of ventilating air.

Since Traxler et al. and Muszynski are in the same field of endeavor, the purpose disclosed by Muszynski would have been recognized in the pertinent art of Traxler et al.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Traxler et al. by forming the cooling wind producing means for producing cooling wind of a low temperature by using driving force of the rotary member as taught by Muszynski for the purpose of reducing noise cause by flow of ventilating air.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Traxler et al. in view of Muszynski and further in view of Millman.

Regarding claim 2, Muszynski discloses the cooling wind producing means comprises: high-speed air flow producing means (100 in Fig. 1) for producing a high-speed air flow with using the driving force of said rotary member; converting means (130) for converting the high-speed air flow produced by said high-speed air flow producing means, to a vortex flow (Col. 3, lines 60-62); an air flow path through which the high-speed vortex flow converted by said converting means is to flow (Fig. 2). Traxler et al.

and Muszynski fail to show a control valve which is disposed on a side of said air flow path opposite to said converting means.

However, Millman discloses an apparatus having cooling structure using vortex flow (Col. 6, lines 65-68) comprising a control valve (59 in Fig. 1 and Col. 2, lines 45-50) which is disposed on a side of said air flow path opposite to said converting means for the purpose of varying the effective flow area (Col. 2, lines 51-53).

Since Traxler et al., Muszynski and Millman are in the same field of endeavor, the purpose disclosed by Millman would have been recognized in the pertinent art of Traxler et al. and Muszynski.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Traxler et al. and Muszynski by using a control valve which is disposed on a side of said air flow path opposite to said converting means as taught by Millman for the purpose of varying the effective flow area.

***Allowable Subject Matter***

4. Claims 3-5 are allowed.
5. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show a magnetic bearing apparatus comprising fins which are disposed on said rotary shaft, and which produces an axial air flow by a driving force of said rotary shaft; a generator which is fixed with forming a predetermined gap with respect to said fins, and which produces a high-speed vortex

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flow; a tube through which the high-speed vortex flow produced by said generator is to flow.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

October 20, 2006

